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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,890	12/09/2003	Ronald Glas	GS 0647 A	4671

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EXAMINER
PILKINGTON, JAMES

ART UNIT	PAPER NUMBER
3682	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/731,890	GLAS ET AL.	
	Examiner	Art Unit	
	James Pilkington	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *13-16* is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedmann, USP 6,435,994 B1, in view of Cote et al, USP 6,356,848 B1.

Re clm 1, Friedmann discloses a continuously variable transmission (100) that includes:

- two conical pulley pairs (101 and 102)
- spaced parallel axes (C15/L14-35)
- an endless torque-transmitting means (103)

Friedmann does not disclose a sensor for detecting the speed of the endless torque-transmitting means.

Cote teaches a sensor (22) positioned opposite to and facing the endless torque-transmitting means for detecting the speed of the endless torque-transmitting means (18) for the purpose of measuring the speed of the chain as it passes the sensor (C5/L16-17).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Friedmann and provide a sensor positioned

opposite to and facing the endless torque transmitting means for detecting the speed of the endless torque-transmitting means as it passes the sensor, as taught by Cote, for the purpose of measuring the speed of the chain.

Re clm 2, Friedman discloses a linear guide bar (see Figure 5) for guiding a slack linear strand of the endless torque-transmitting means (103).

Friedmann does not disclose a sensor carried on a guide bar that guides a slack strand of the endless torque-transmitting means and that can pivot about an axis that is parallel to the axes of conical pulley pairs.

Cote discloses the sensor (22) is carried on a guide bar (19) that guides a slack strand of the endless torque-transmitting means (18) and that can pivot about an axis that is parallel to the axes of the conical pulley pairs (at 51).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Friedmann and provide a sensor that is carried on a linear guide bar that guides a slack linear strand of the endless torque-transmitting means and that can pivot about an axis that is parallel to the axes of the conical pulley pairs, as taught by Cote, for the purpose of allowing the chain to move to vary the transmission ratio (C4/L44-50).

Re clm 3, Friedmann discloses the guide bar (104) is carried on a fixed support (114) positioned between the conical pulley pairs.

Re clm 4, Friedmann discloses the torque-transmitting means (103) is a plate link chain (Figure 1) that includes pins (Figure 1) that interconnect adjacent chain links.

Friedmann does not disclose that the sensor detects pins as they pass the sensor.

Cote teaches that the sensor (22) detects pins (raised magnetic members 29a-e) as they pass the sensor (22) for the purpose of measuring the speed of the chain (C5/L16-17).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Friedmann and take the magnetic members (29a-e) of Cote and install them on the chain link (103) of Friedmann for the purpose of measuring the speed of the chain.

Re clm 5, Cote discloses that the sensor (22) is a proximity sensor (C5/L48)

Re clm 6, Cote discloses the sensor (22) is connected to a control unit (110) in which data is stored and determines the speed (C9-10).

Re clm 7 and 8, Cote that the number of magnets and the distance apart is stored in the control unit (110) (C5-10).

Re clm 9, Friedmann discloses that the fixed support (114) is a tubular member (C16/L20-21). The examiner notes that an oil pipe is a tubular member based on the definition of the word pipe in Merriam-Webster's Collegiate Dictionary (10^{th} ed.). Merriam-Webster defines a pipe as a "tubular or cylindrical object, part or passage."

Re clm 10, Friedmann discloses the guide bar (104) is displaceable in a direction that is substantially perpendicular to the movement direction of the endless torque-transmitting means (103) (see Figure 3).

Re clm 11, Friedmann discloses the pivot axis (114) of the guide bar (104) is positioned between the pulley axes and is within a loop defined by the endless torque-transmitting means (103) (see Figure 2).

Re clm 12, Friedmann discloses the end faces of the pins are in frictional engagement with the conical surfaces of the conical disks (pulleys 101 and 102).

Allowable Subject Matter

3. Claims 13-16 are allowed.

Response to Arguments

4. Applicant's arguments filed July 16, 2007 with respect to claims 1-12 have been fully considered but they are not persuasive.

5. The Applicant argues Cote does not disclose a sensor for detecting the linear speed of the drive chain, but only detects the speed of the jockey wheel pages 9-10.

Cote does indeed disclose a sensor for detecting the linear speed or the torque transmitting means as clearly stated in column 5 line 16-17. Cote states "the speed sensor measures the speed of the chain." The detection of the speed happens as the chain passes the sensor and causes the jockey wheel to rotate. The claim does not require that the speed of the torque transmitting means be detected directly by the sensor. Since Cote uses a speed sensor to detect the speed of the chain Friedmann in view of Cote renders the claim combination obvious.

6. The Applicant argues that Cote does not disclose a sensor positioned opposite to and facing the endless torque-transmitting means and does not interact with the chain (bottom of page 10).

Claim 1 does not require that the sensor interact with the chain. As stated in claim 1, the sensor is only required to be "located at a position relative to the path of movement of the endless torque-transmitting means." Again, since the claim does not require that the sensor directly detect the pins of the chain Friedmann in view of Cote renders the claim combination obvious.

7. In response to applicant's argument that the Cote et al reference is nonanalogous art (page 12 lines 1-12), it has been held that a prior art reference must either be in the field of applicant's endeavor **or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned**, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the Cote et al reference relates to the particular problem since the reference discloses a sensor for detecting the speed of an endless torque-transmitting means.

8. The Applicant argues that there is no disclosure, suggestion or motivating found in the references to combined the prior art (page 12 line 12-page 13 line 13).

In response, KSR forecloses the argument that a specific teaching, suggestion, or motivation is required to support a finding of obviousness. See the recent Board

decision Ex parte Smith, - -USPQ2d- -, slip op. at 20, (Bd. Pat. App. & Interf. June 25, 2007) (citing KSR, 82 USPQ2d at 1396) (available at http://www.uspto.gov/web/offices/dcom/bpai/prec/fd071925.pdf).

9. In response to Applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (page 12 line 15-page 13 line 13), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

10. In response to Applicant's argument that the two references can not be bodily incorporated (page 13 line 14 – page 14 line 17) because the sensor magnets would have to be on one of the pulleys, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case Cote would suggest to one having

ordinary skill in the art that a jockey wheel/magnet sensor assembly can be inserted in to the device any where along the device, in particular within the chain guide.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Pilkington whose telephone number is (571) 272-5052. The examiner can normally be reached on Monday-Friday 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JP
7/30/07

RICHARD RIDLEY
SUPERVISORY PATENT EXAMINER

Continuation of 13. Other: The proposed amendments change the scope of claims in such way that the examiner is required to further search the prior art and make new consideration of any prior art that was not applied prior to the curent amendments..